

Colorado Utility Landscape

Presented to

Colorado Wind & Distributed Energy Conference

Denver, Colorado

April 8, 2002

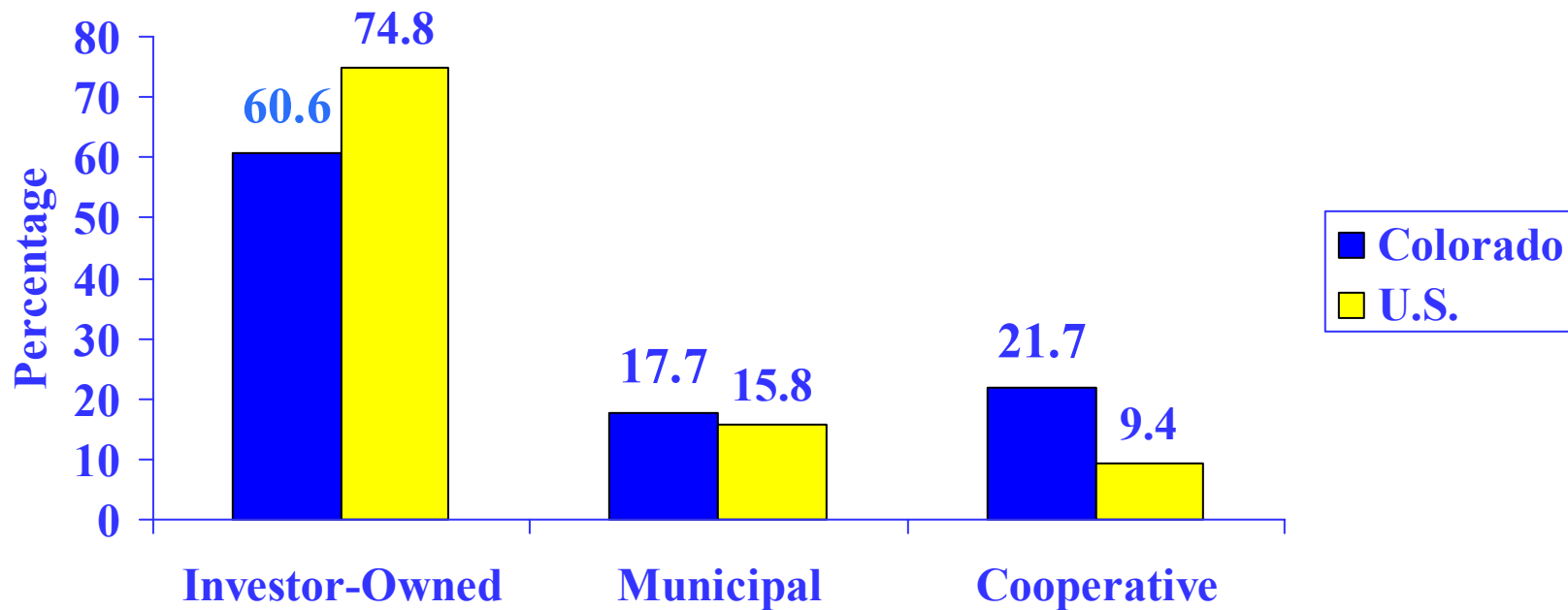
Gary E. Schmitz

Colorado Public Utilities Commission

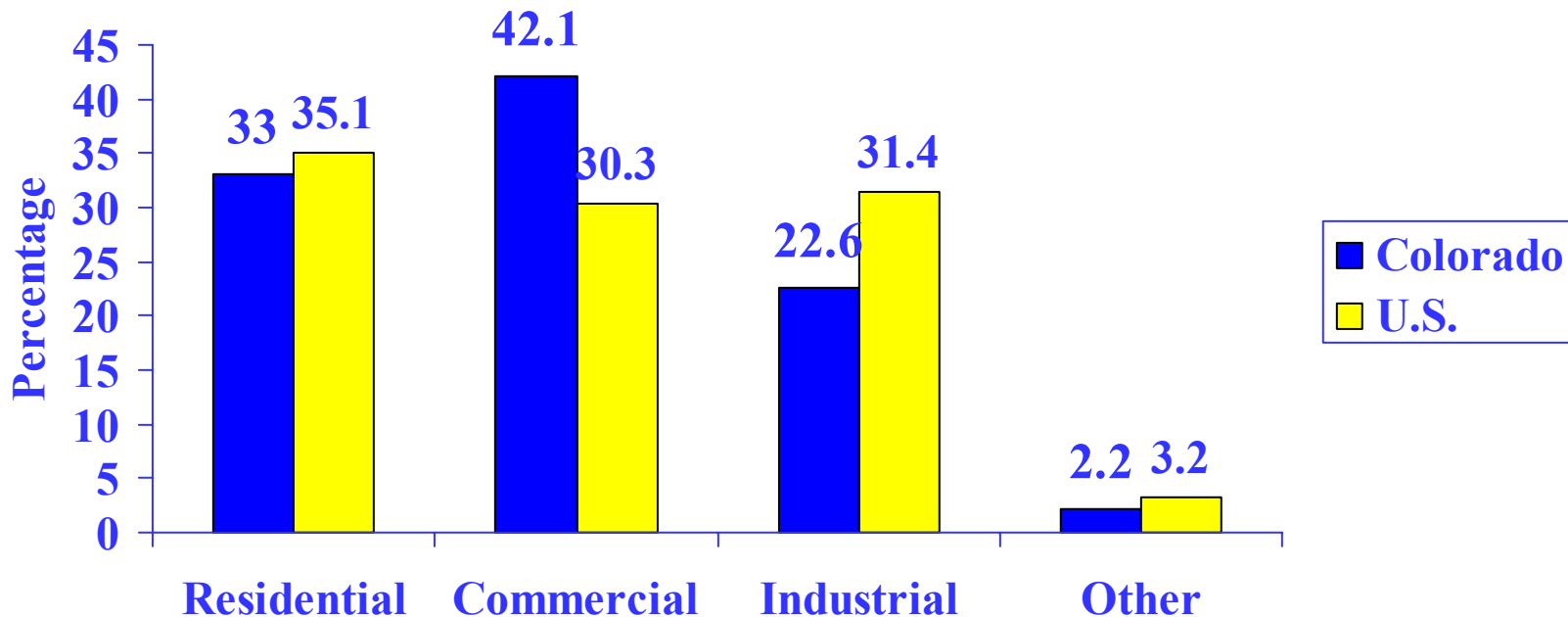
Outline of Presentation

- **Colorado Utility Landscape**
 - Characterize CO electric industry
 - Current Generation
- **Resource Planning**
 - Forecasts and future needs
- **Transmission Issues**
- **Opportunities**

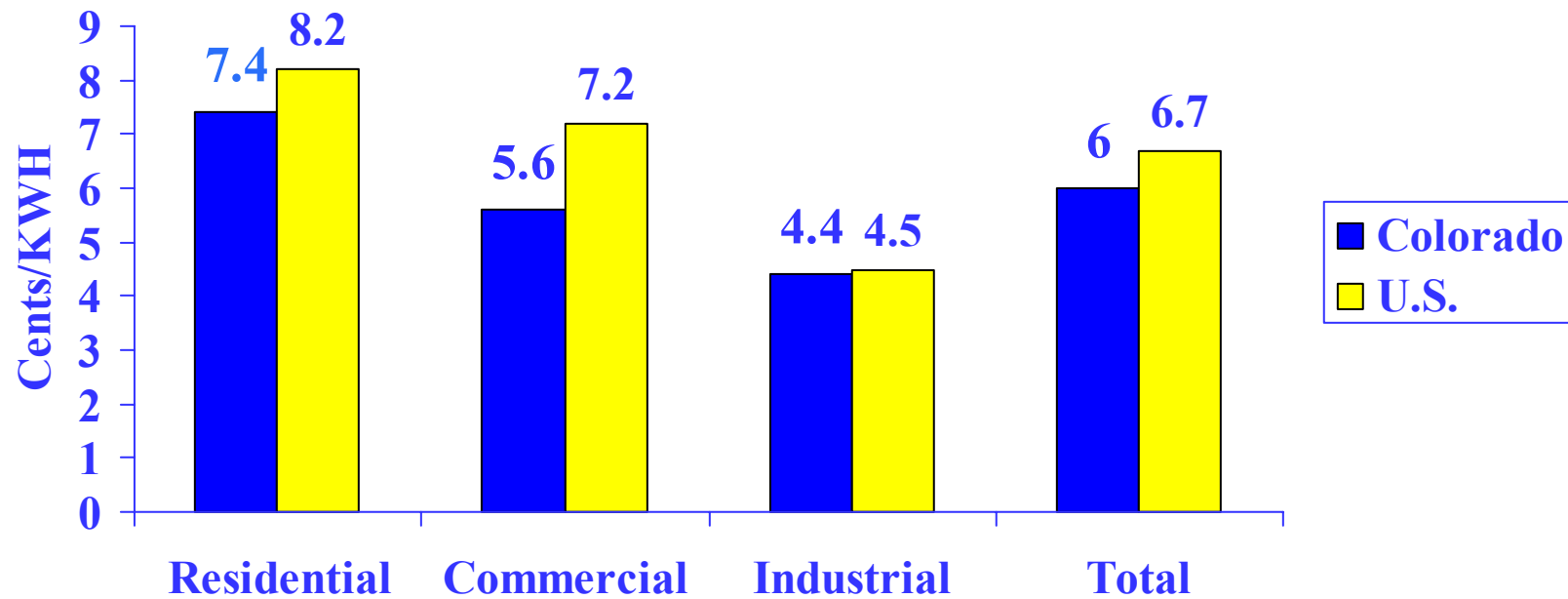
Utility Sales by Type of Ownership [2000]



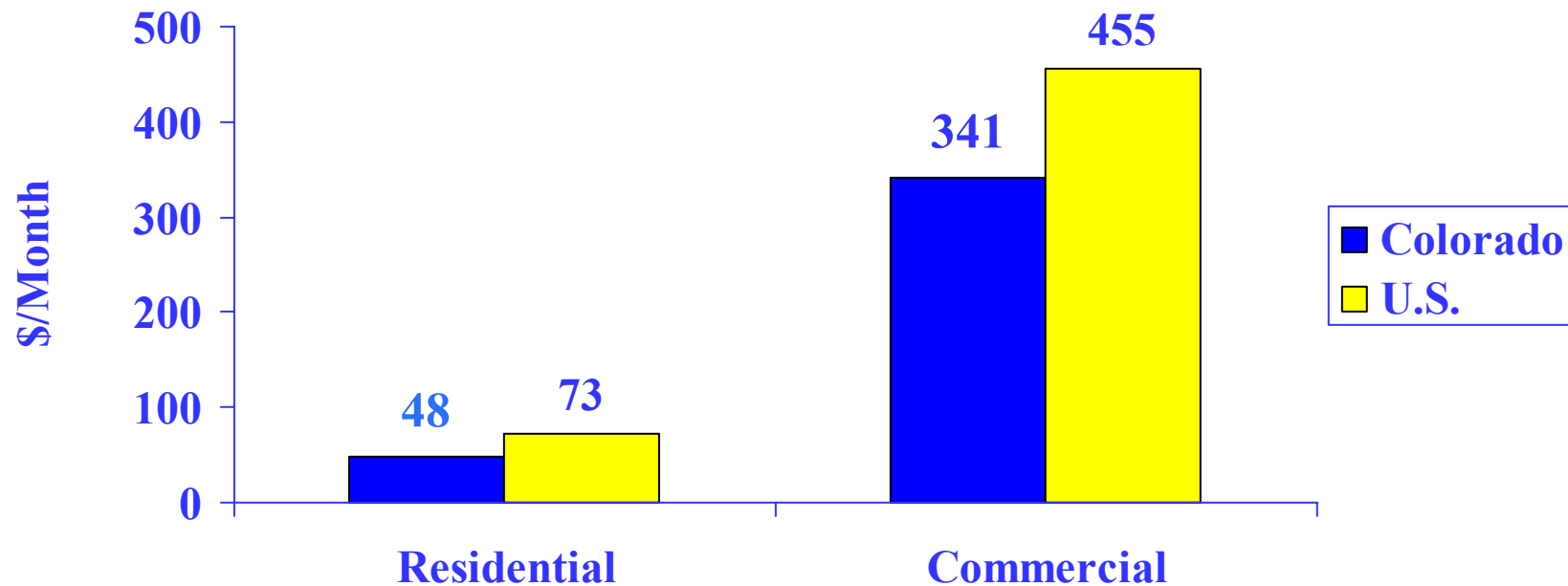
Utility Sales by Type of Customer [2000]



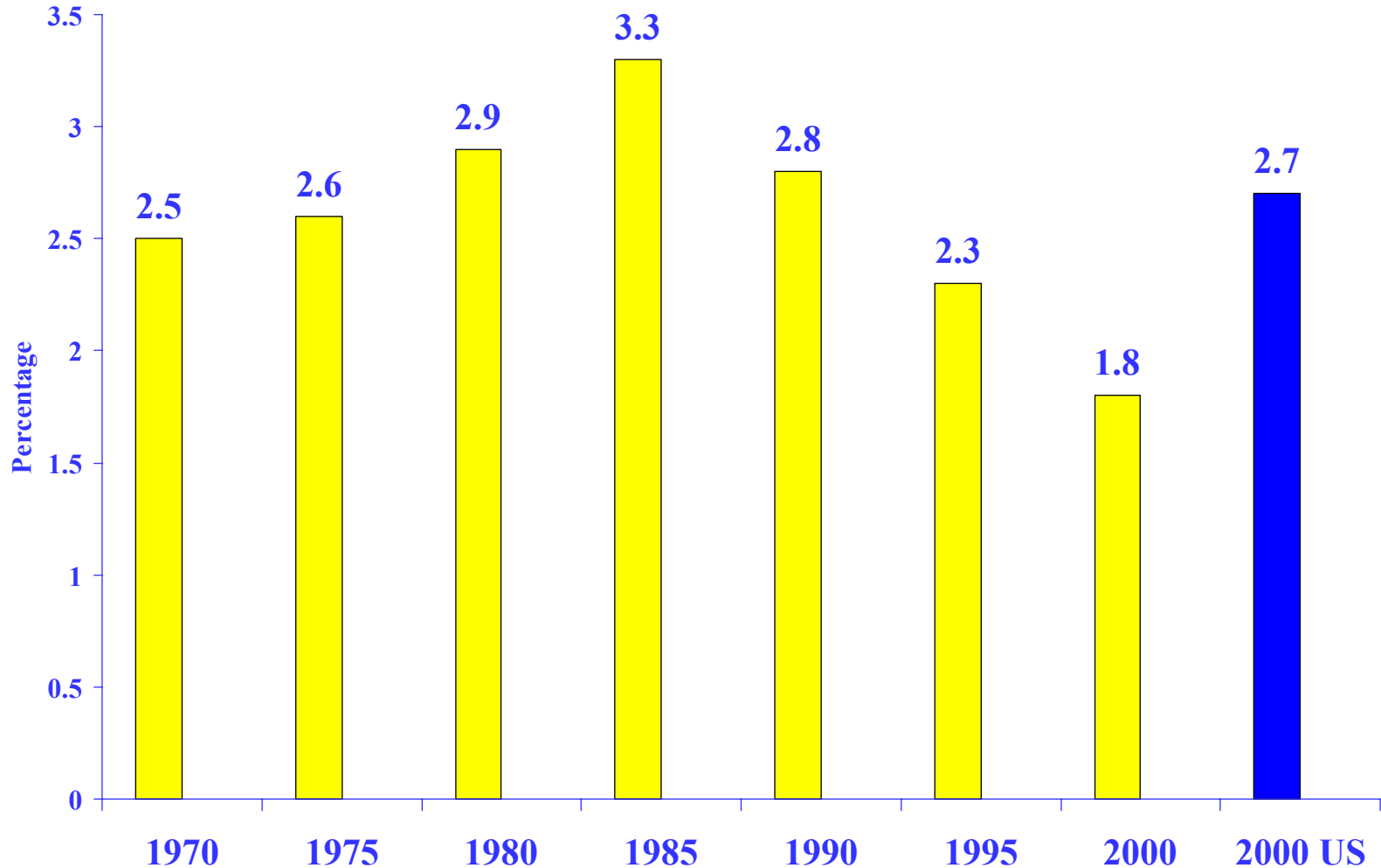
Average Electricity Rates [2000]



Average Electricity Bills 2000 (Monthly)

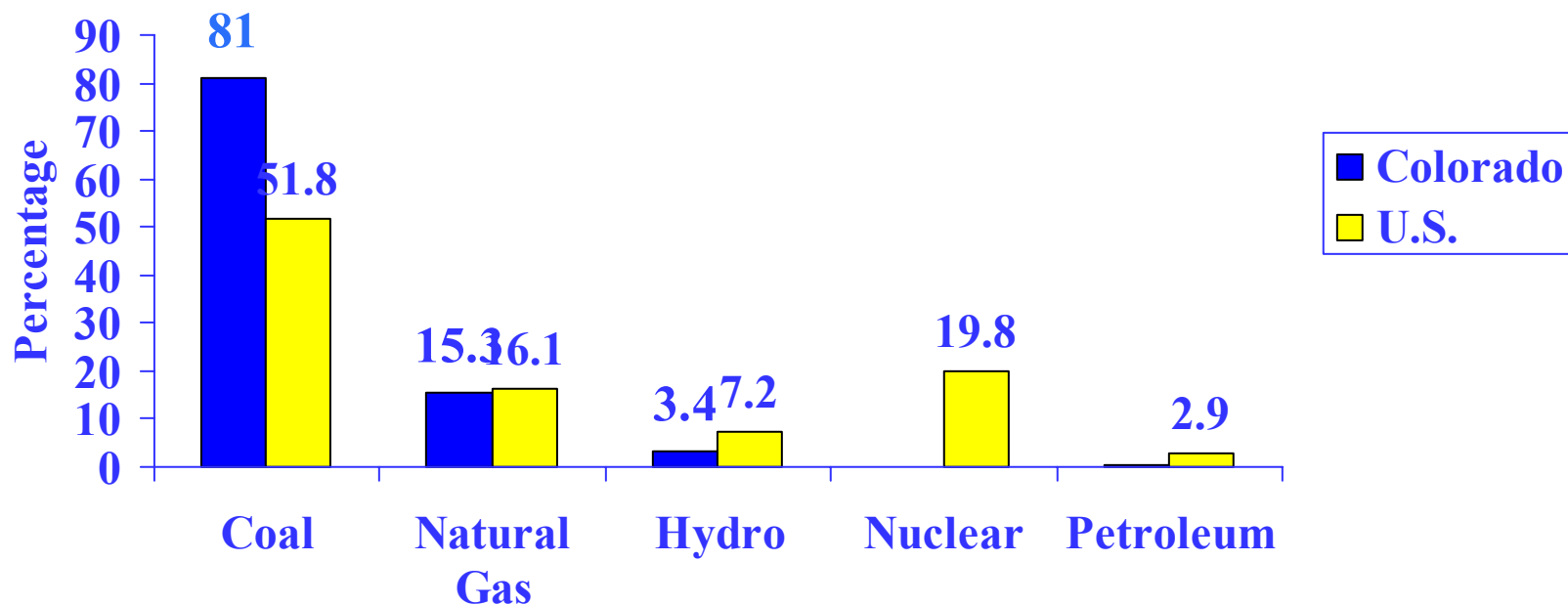


Colorado Electricity Spending As a % of Personal Income



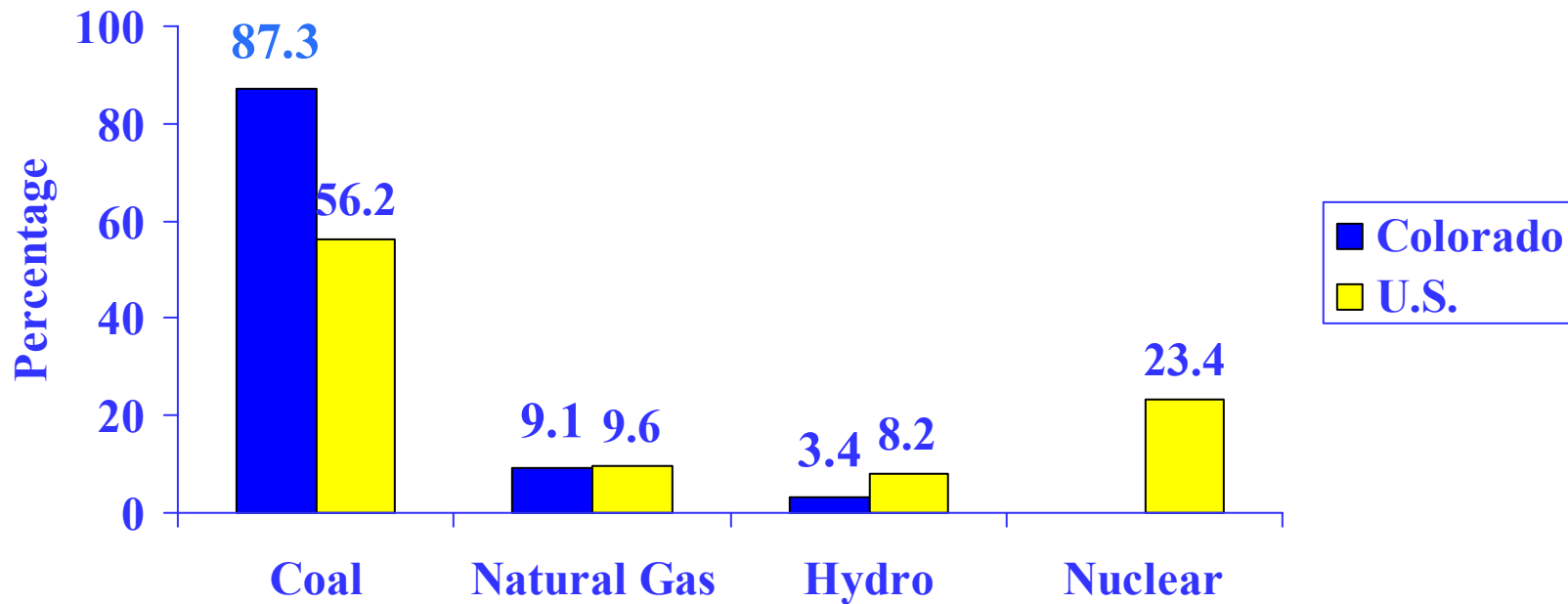
Total Generation by Fuel Source 2000

(CO: 43,661 million kwh)



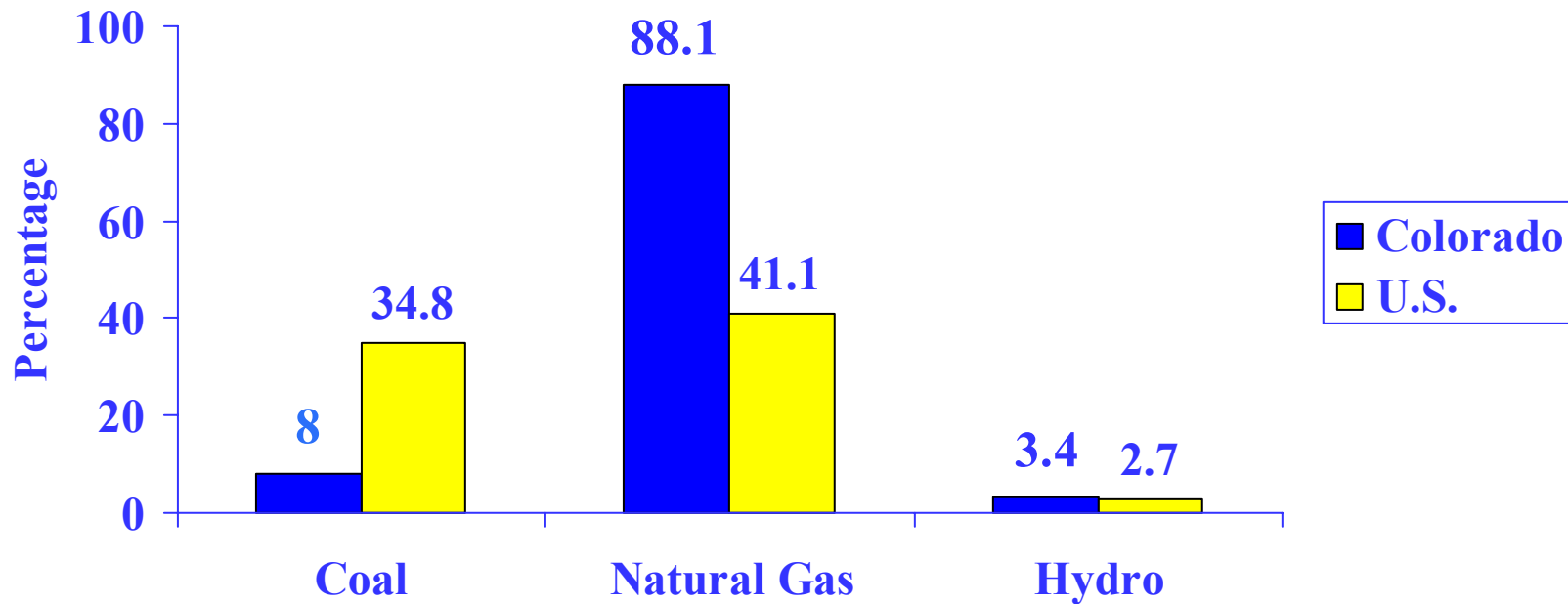
Utility Generation by Fuel Source 2000

(92.2% of Colorado total)

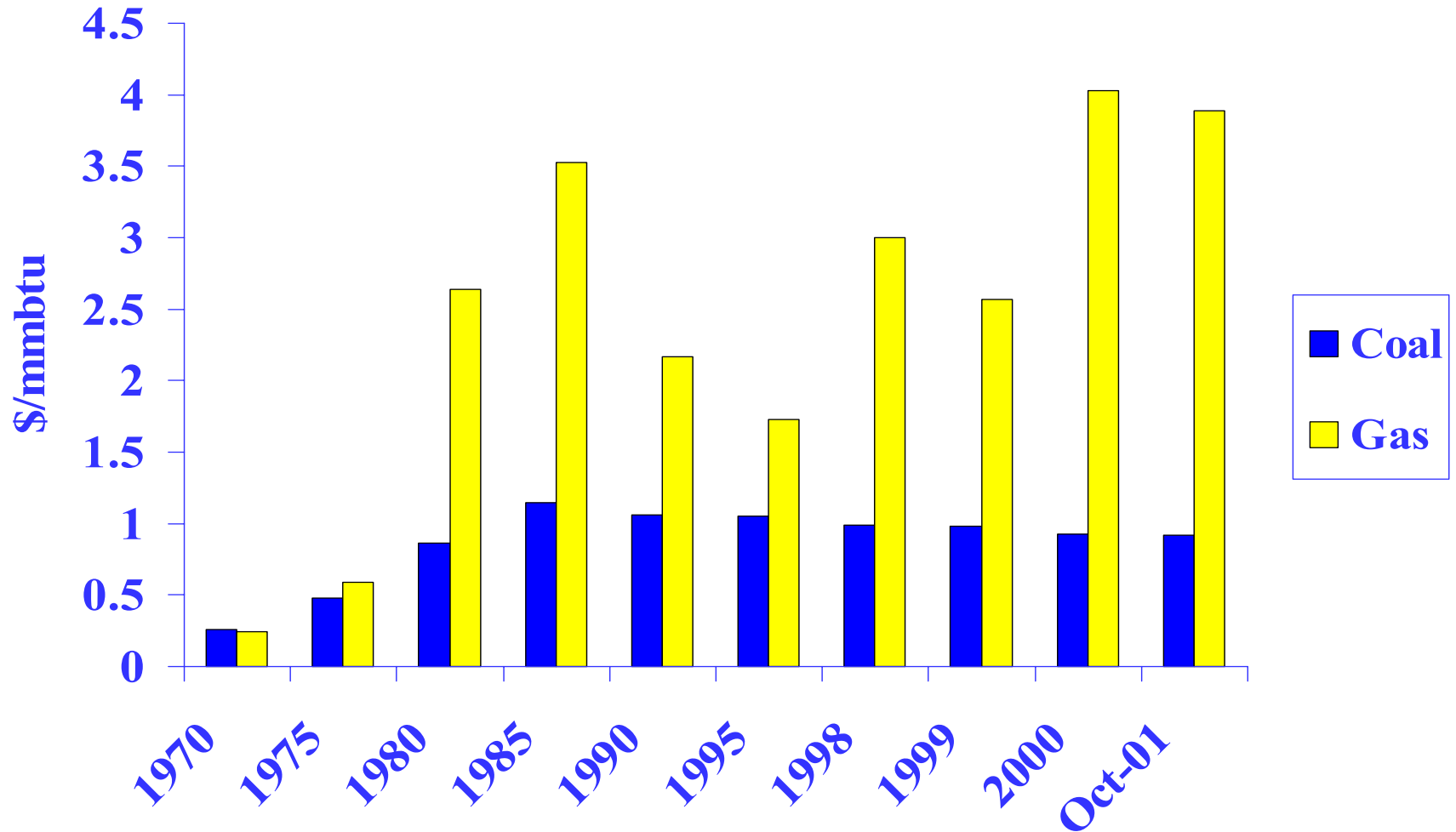


Non Utility Generation by Fuel Source 2000

(7.8% of Colorado total)

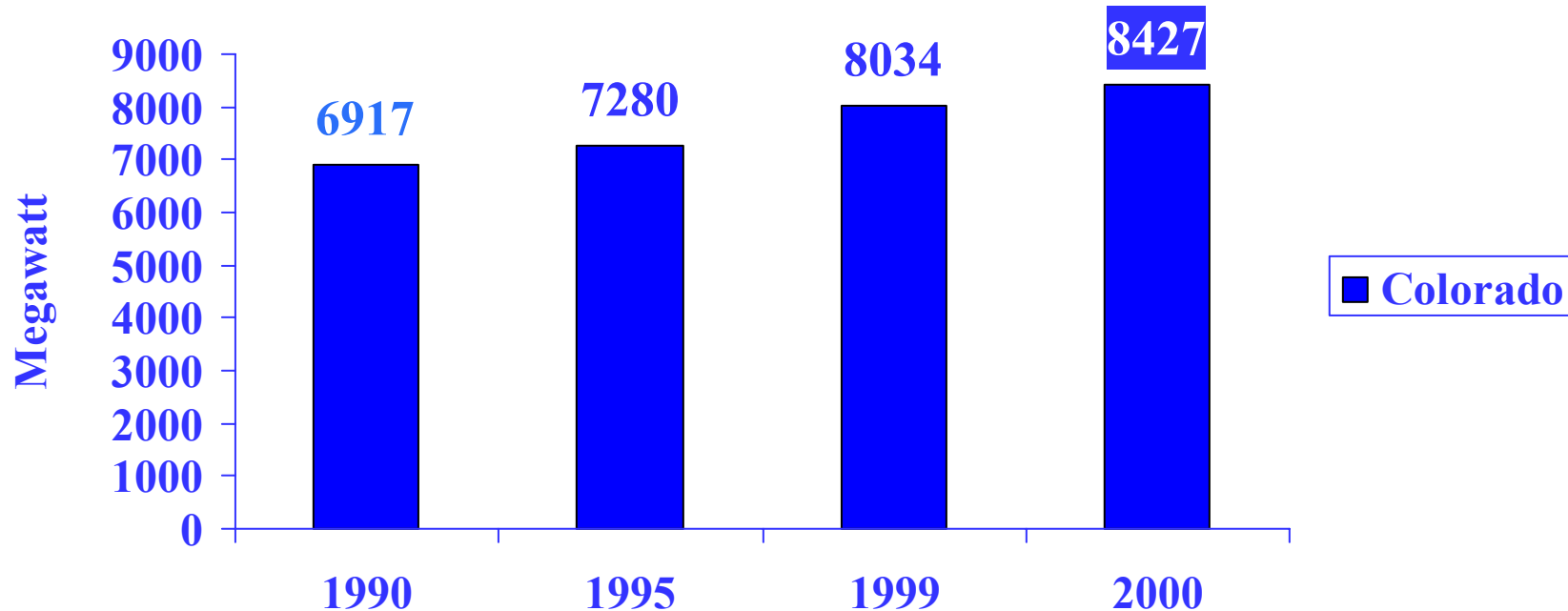


Colorado Utility Fuel Prices Delivered

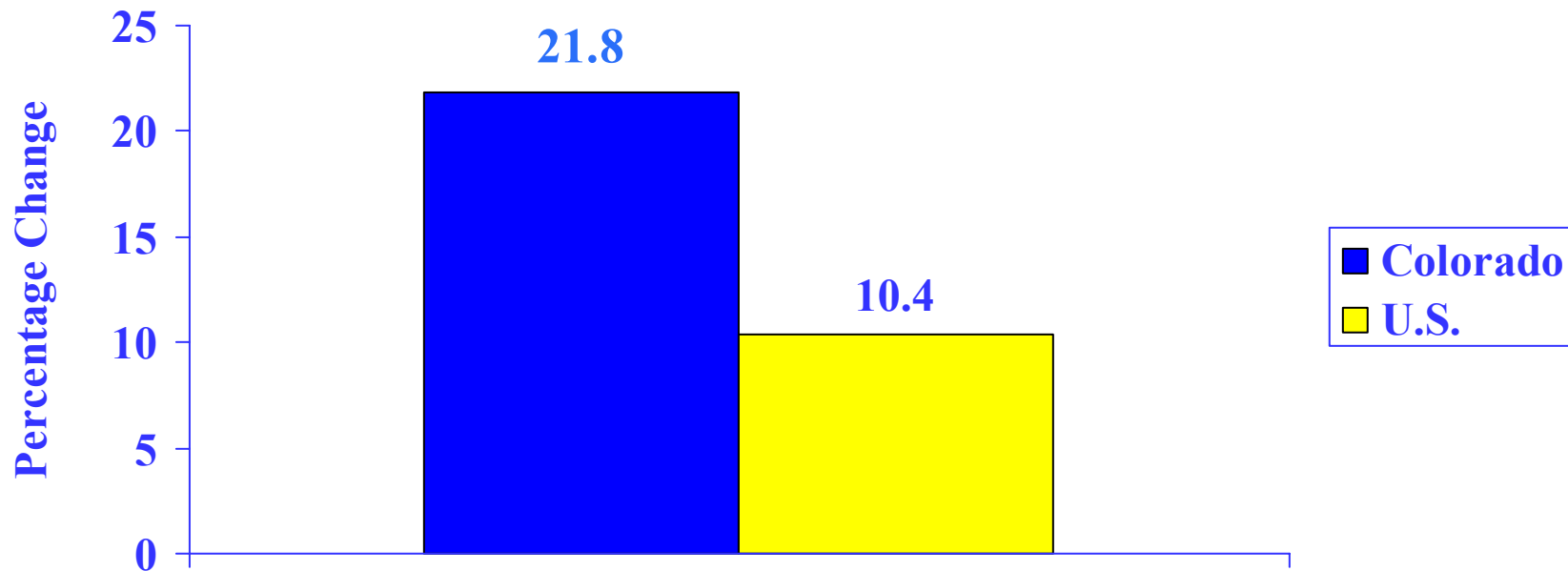


Colorado Generation Capability

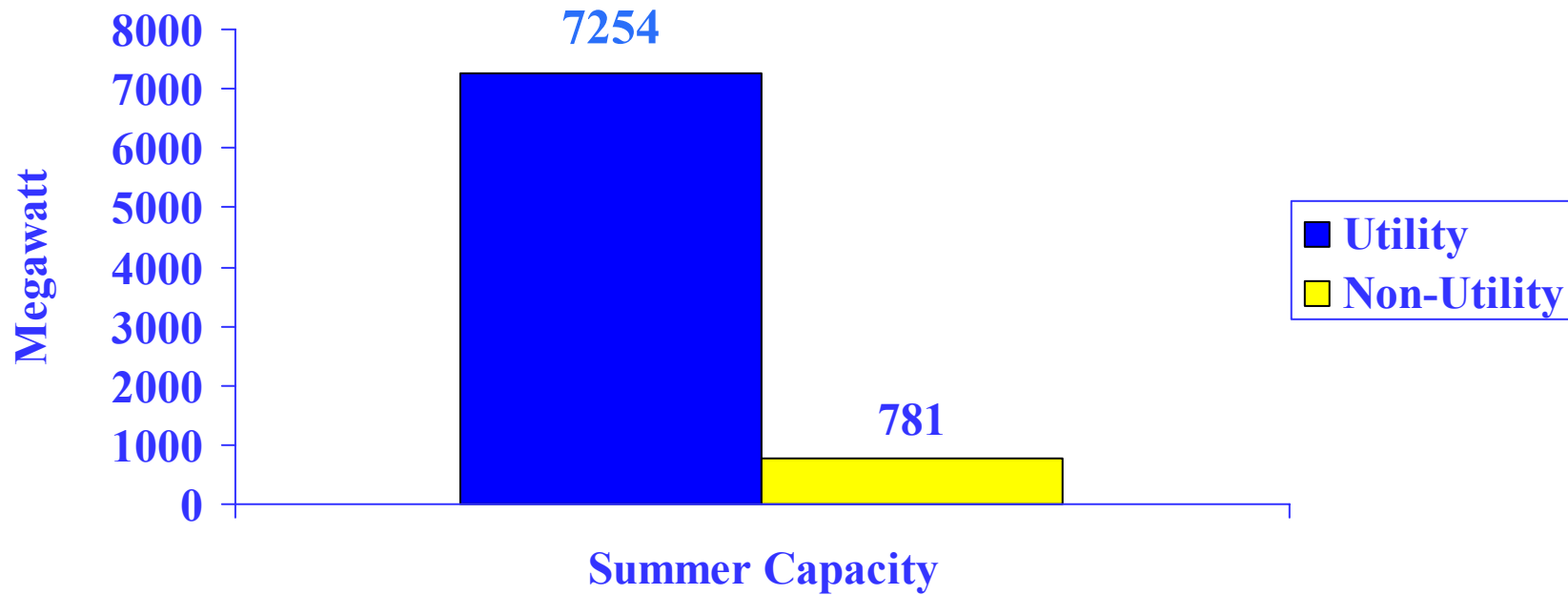
(1,510 MW added in 10 years)



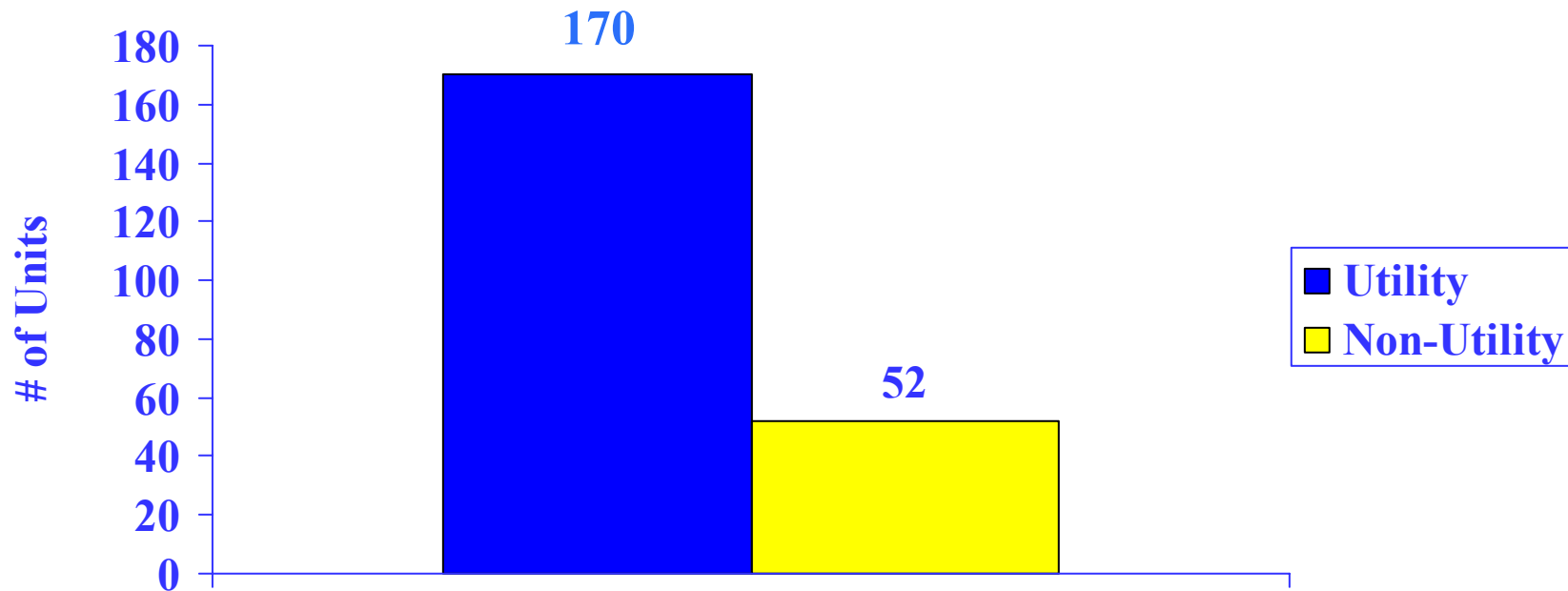
Growth in Generation Capability 1990-2000 Percent Change



Colorado Generation Capability (1999)



Colorado Generating Units (1999)



Integrated Resource Planning

Purpose (Existing rules)

- Due to high capital cost and time involved in electric supply options, IRP rules take a long-term perspective.
- IRP rules require competitive bidding.
- IRP rules consider a variety of resources: DSM, renewables, and supply side options.
- Commission balances eight criteria.

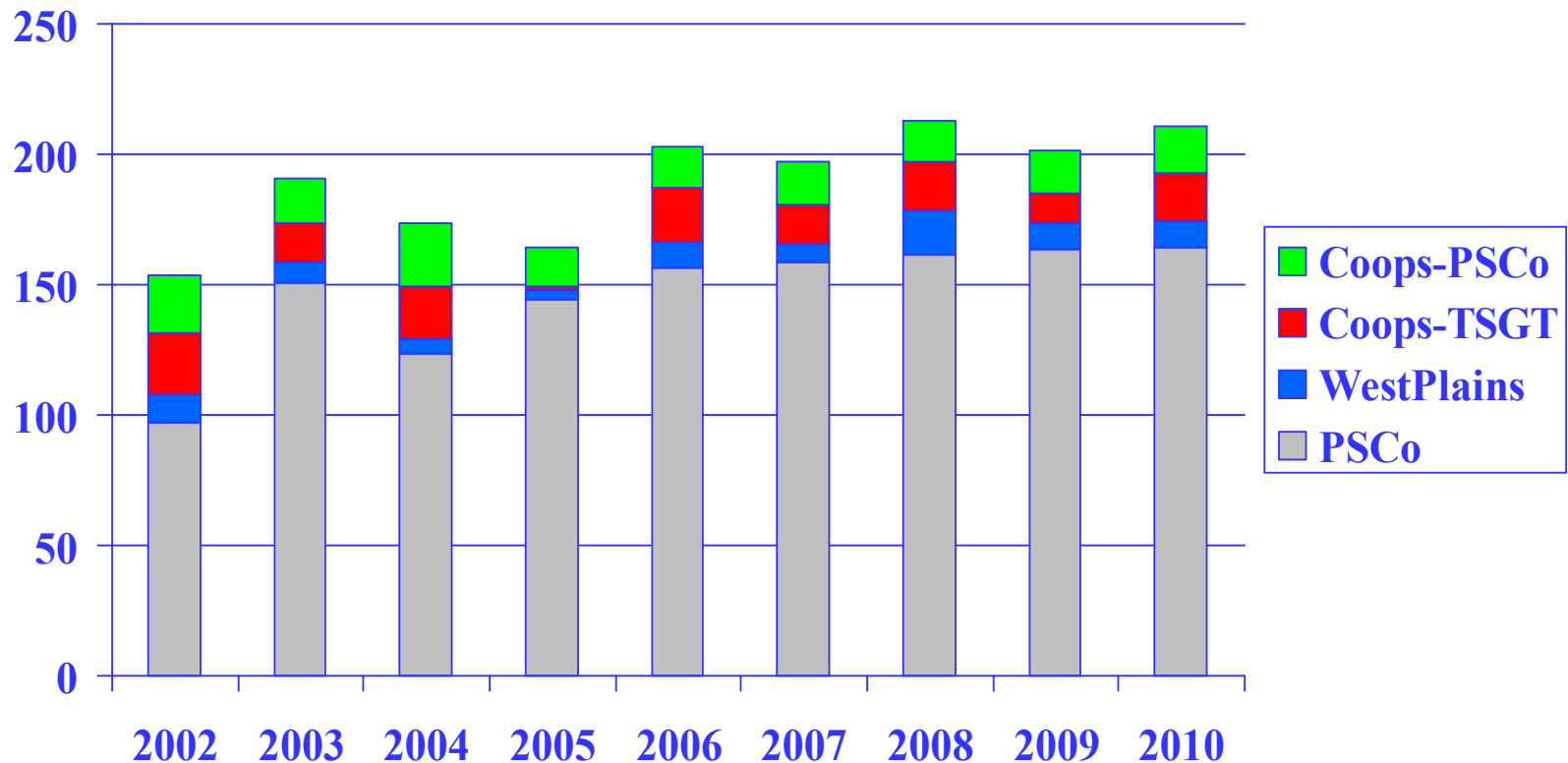
Integrated Resource Planning Overview (Existing Rules)

- **STEP 1: Utility determines its energy and capacity needs for next twenty years.**
- **STEP 2: Utility determines the existing resources to be available to meet this need.**
- **STEP 3: If existing resources are inadequate to meet future needs for next six years - BID.**
- **STEP 4: Utility determines preferred plan and applies for Commission approval.**
- **Process allows public participation – intervention by interested parties.**

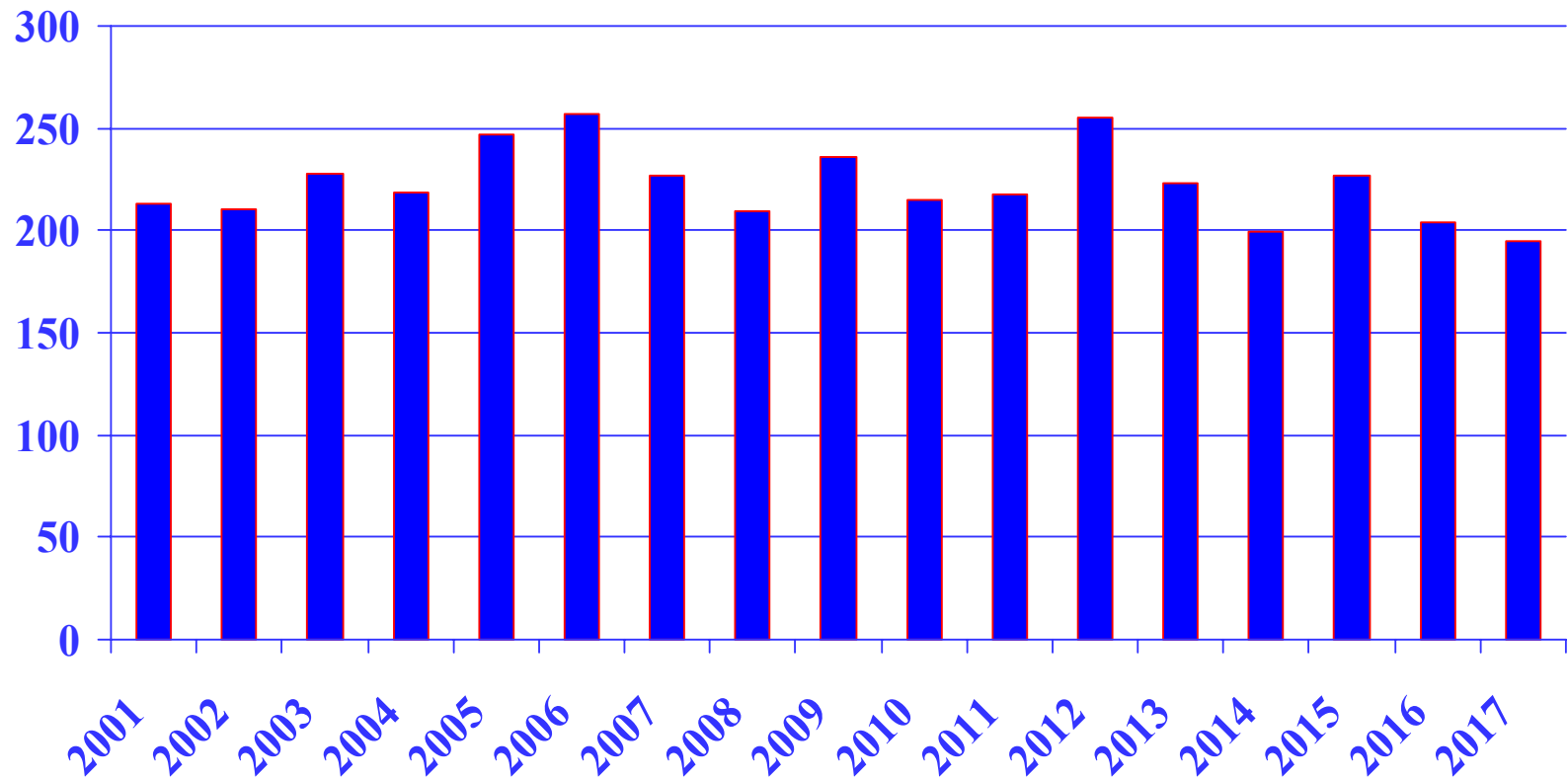
**Predictions are hard to make,
particularly about the future.**

Yogi Berra

Colorado Peak Load Forecast - IRP (Additional MW)

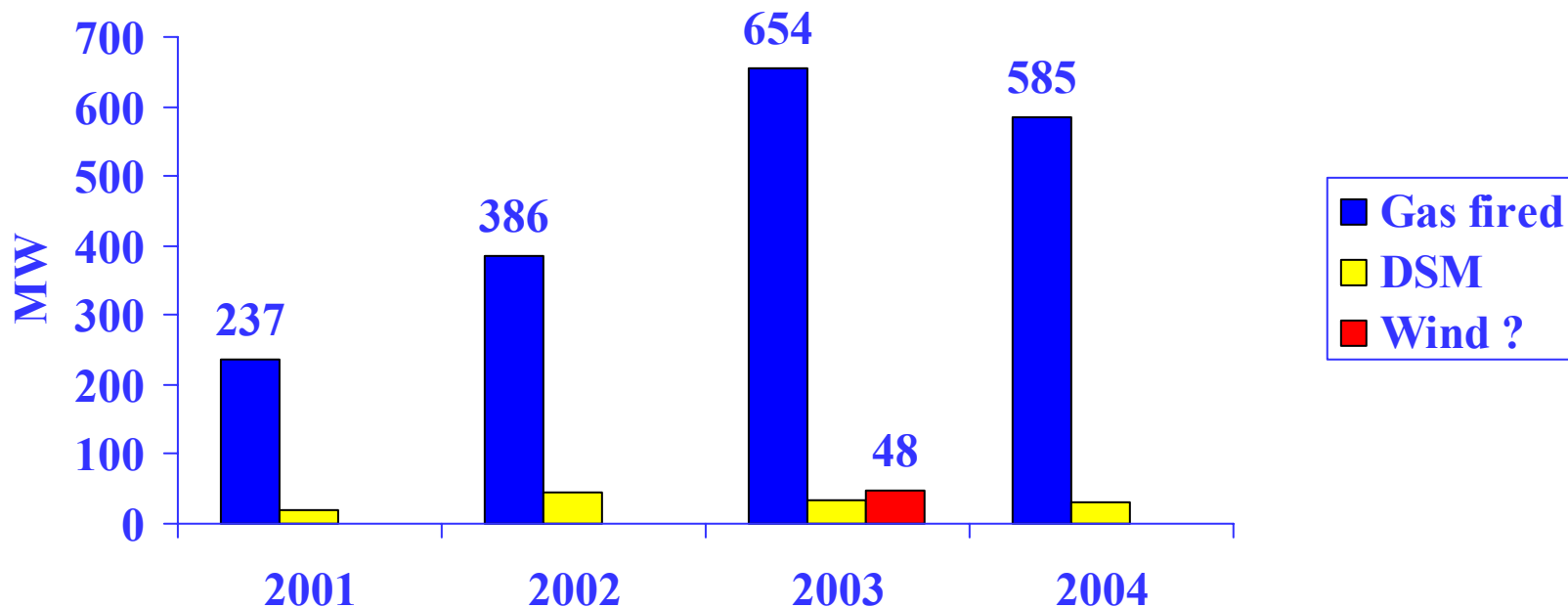


Colorado Peak Load Forecast - EAP (Additional MW)



PSCo Resource Additions

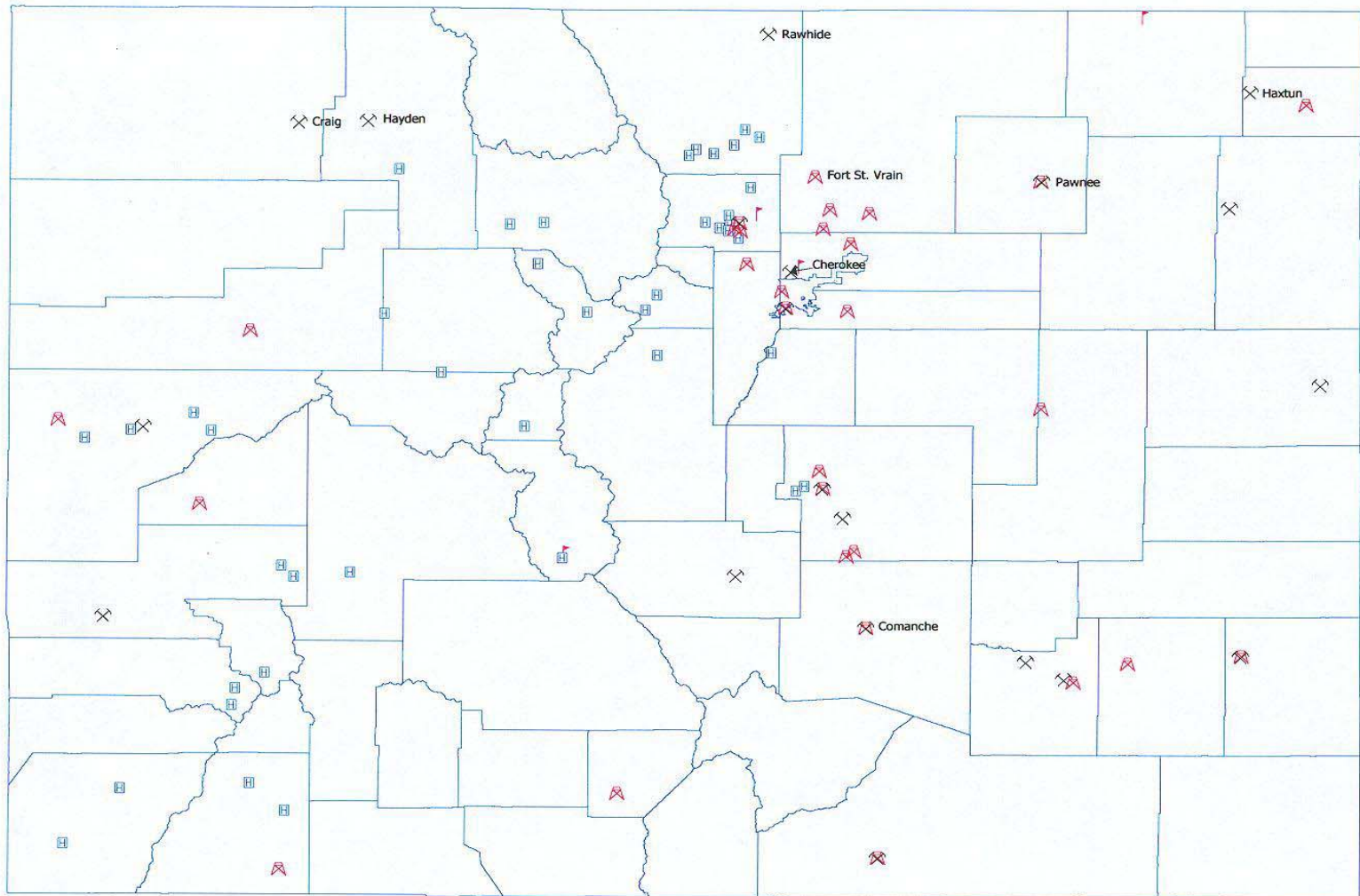
1,830 MW of gas-fired capacity



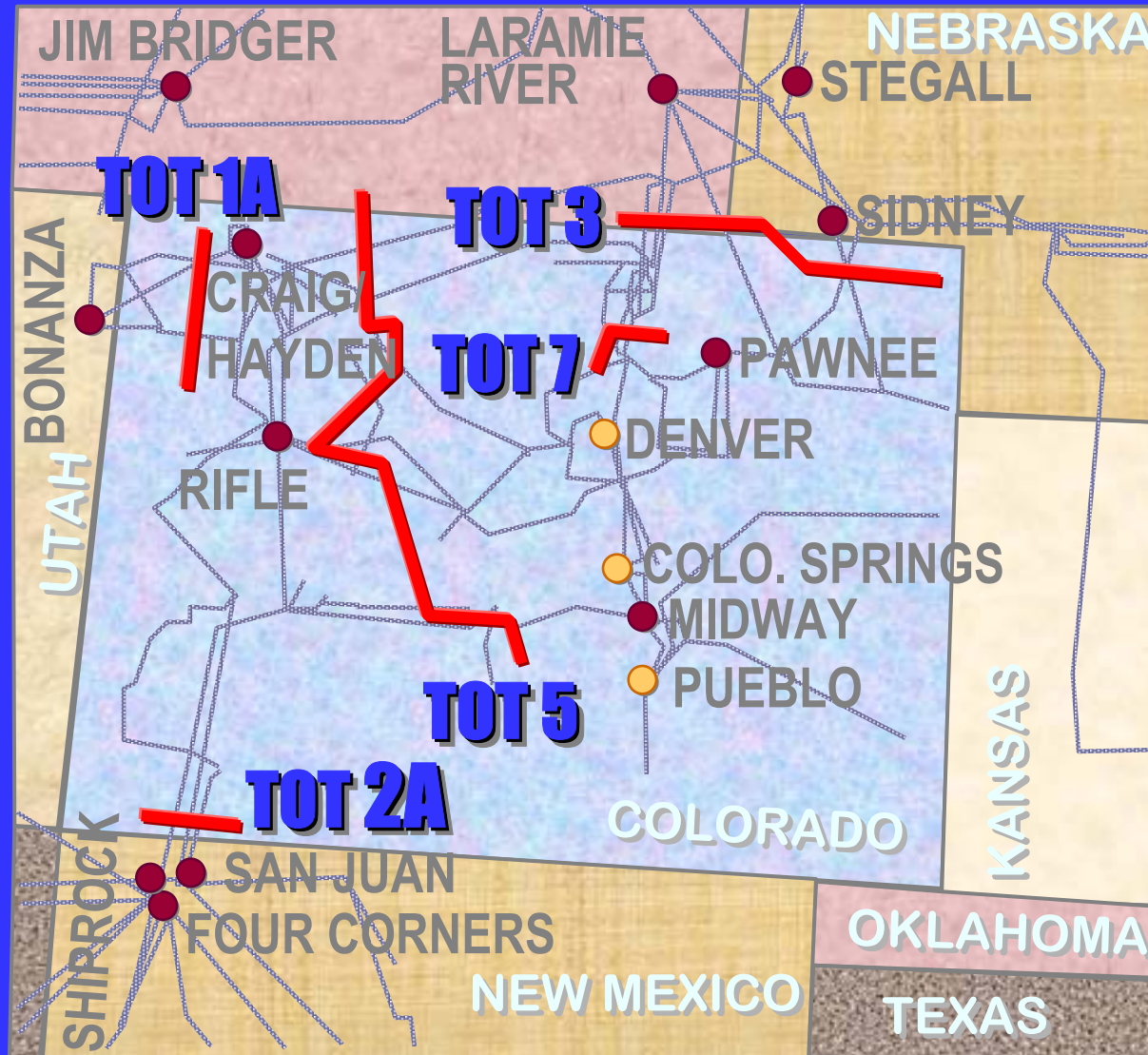
Integrated Resource Planning Overview (Proposed Rules)

- **Three Options**
 - 1. Abolish IRP rules.
 - 2. Review demand forecasts & determine resource need.
 - 3. Streamline existing rules.
- **Timeline**
 - Proposed rules mailed: 2/26/02
 - Initial comments received: 3/29/02
 - Reply comments due: 4/19/02
 - Hearing: 4/30/02 – 5/2/02

Colorado Generating Stations



Transmission Constraints



Wind Opportunities

- **Demonstrate cost-effectiveness**
- **Existing legislative direction to the PUC**
 - **40-2-123: Fullst possible consideration to cost-effective implementation of new clean energy in generation acquisition.**
 - **40-3-111: If the PUC considers externalities also must look at other economic factors.**
- **Potential new legislation**

